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(54) **MULTILAYER MAGNETIC THIN-FILM**

(57)Abstract:
PURPOSE: To obtain a multilayer magnetic thin film, from which multilayer films having the stable conditions of film formation and excellent high-frequency magnetic characteristics are acquired, by using a nitride as an insulator in the multilayer magnetic thin film in which magnetic substances and the insulators are laminated alternately.
CONSTITUTION: A multilayer magnetic thin-film is manufactured by alternately laminating magnetic films and insulating layers through an evaporation method such as a sputtering method, but a material having excellent soft magnetism in a high-frequency region is required as the magnetic film, and an amorphous material having high saturation magnetic flux density, magnetostriction close to zero and high electric resistivity is proper as the material. There are metal-metal group and metal-semimetal group compositions as the amorphous material, and a Co-Nb-Zr group and a (Co.Fe)-(Si.B) group are cited as a representative composition example. A material having composite structure and composition modulation structure may be used besides said material, and any material may be employed when it is a material having excellent high-frequency characteristics in any case. The nitride of any metal or semimetal may be used as a nitride as the insulating layer, but AlN, BN, Si3N4, TiN and VN are particularly favorable.

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